

NOATAK Health Clinic



Alaska Rural Primary Care Facility Code and Condition Survey Report

July 23, 2001



I. EXECUTIVE SUMMARY

Overview

The Noatak Clinic is a wood frame clinic on steel piling which has a recent addition. The original clinic was reportedly constructed in 1978. The building has some serious design problems which are the result of additions which create problems in the layout. These are solvable problems that warrant good design evaluation and a plan to fix them. A new clinic would eliminate the need for these modifications. A new subdivision has been created about a half mile from the school and the community wants a new clinic located on some land in this area. The report justifies a new clinic, however, the site selected by the community should be carefully considered for proximity to the school and other community facilities. A site nearer the school might be more appropriate.

Renovation and Addition

The existing clinic is 1242 s.f. and would require an addition of 758 s.f. to meet the 2000 s.f. minimum area recommended for a medium clinic by the Alaska Rural Primary Care Facility study. The floor plan layout would require the remodel of approximately 75% of the interior space. Additionally, the building will require extensive upgrades to improve the foundation, thermal enclosure and other building systems. The cost of required renovations and code upgrades, combined with the cost of a new addition equal 92% of the cost of a new clinic.

New Clinic

Because the cost of renovation and addition is more than 75% of the cost of new construction, a new clinic of at least 2000 s.f. should be built to replace the existing clinic. The community has expressed an interest in locating the new clinic at the site of the newest subdivision. This site is satisfactory, however the site is remote from the school and other community facilities. Further evaluation of the clients, community preference, distances traveled to and from the clinic, and other aspects of health care delivery should be considered prior to selecting a final site.

II. GENERAL INFORMATION

A. The Purpose of the Report

ANTHC has entered into a cooperative agreement with the Denali Commission to provide management of the small clinic program under the Alaska Rural Primary Care Facility (ARPCF) assessment, planning, design, and construction. The purpose of the Code and Condition Survey Report is to validate the data provided by the community in the Alaska Rural Primary Care Facility Needs Assessment and to provide each community with a uniform standard of evaluation for comparison with other communities to determine the relative need among the communities of Alaska for funding assistance for the construction of new or remodeled clinic facilities. The information gathered will be tabulated and analyzed according to a set of fixed criteria that will yield a priority list for funding. Additionally, the relative costs of new construction vs. remodel/addition will be evaluated to determine the most practical and cost effective means to bring the clinics up to a uniform standard of program and construction quality. The information provided in this report is one component of the scoring for the small clinic RFP that the Denali Commission sent to communities in priority Groups 1 and 2.

B. The Assessment Team

The survey was conducted on May 21, 2001. John Crittenden, AIA, Architects Alaska and Bill Henriksen, PE, RSA Engineering completed the field inspection for this project. Mark Anderson of ANTHC and Jim Howell of Maniilaq Association were the team escorts. Mark reviewed alternative site locations with village leaders. Jim is an Environmental Health Specialist for the region and this trip accounted for one of his scheduled community visits. Both Mark and Jim knew the village contacts personally and made introductions and conducted the village briefings. Team members who assisted in the preparation of the report included Stephen Schwicht and Ian VanBlankenstein of NANA/DOWL, project managers for the survey team, and Jay Lavoie of Estimations, Inc.

C. The Site Investigation

The format adopted is similar to the “Deep Look”, a facility investigation and condition report used by both ANTHC and the Public Health Service, in maintaining an ongoing database of facilities throughout the country. Facilities are evaluated with respect to the requirements of the governing building codes and design guidelines. Building code compliance, general facility condition, and program needs have been evaluated. This written report includes a floor plan of the clinic and a site plan indicating the existing clinic site. Additional information gathered during the site investigation that is referred to in the report, which includes sketches of building construction details, a building condition checklist, and proposed plans for village utility upgrades, are not included with this report. This information is available for viewing at ANTHC’s Anchorage offices and will be held for reference.

III. CLINIC INSPECTION SUMMARY

A. Community Information

The community of Noatak has a current population of 428 as published in the 2000 U.S. Census. It is located 55 miles north of Kotzebue and is located in the Kotzebue Recording District. It is a part of the NANA Regional Corporation. Refer to the attached Alaska Community Database prepared by the Alaska Department of Community and Economic Development in Appendix C.

B. General Clinic Information

The Noatak Clinic is a well constructed building built in 1978 with an addition which includes a new trauma/exam room and a large office. The original clinic rests on 4 inch steel tube piling using three parallel glued laminate timbers longitudinally for support, the addition sits on a built-up gravel pad with post and pad foundation. The clinic addition keeps the detailing theme of the existing building.

C. Program Deficiency Narrative

The clinic plan has the main entry located at the wrong end of the program space as all patients must pass the sleep room, which doubles as a medicine room, past the kitchen, which incorporates a shower, and past the secondary exam room in order to get to the centralized waiting area and the office. It would be much more functional to locate the main entry at the existing side entry (where it was originally designed), restricting access to the back exit, while maintaining the vestibule for travel/EMS storage and other supplies not needed on a daily basis. The toilet room should be enlarged to accommodate the shower/tub. The sleep room should be located in the room opposite the kitchen, converting the front small room into a med/lab space. The large exam room in the new space was constructed as a trauma space, however, it does not have 48" door width and the ramp is quite steep. One improvement would be to close off the back ramp and take out the door, construct 48" doors to the clinic, replace the exterior doors at the side exit with 48" doors and construct a new ramp to serve that entrance, capable of handling trauma patients on stretchers.

The following table illustrates a comparison between the current actual square footage (SF) and the 2000 s.f. minimum area recommended by the Alaska Rural Primary Care Facility study for a Medium Clinic:

Table 1 – ARPCF Clinic Area Comparison

Purpose/Activity	#	Existing Net SF	#	ARPCF Medium	Difference
Arctic Entry/EMS stor	1	80	2	2 @ 50=100	20
Wait/Recep/Closet	1	120	1	150	30
Trauma/Telemed/Exam	1	144	1	200	56
Office/Exam	1	95	1	150	55
Admin./Records	1	138	1	110	-28
Pharmacy/Lab	-		1	80	80
Portable X-ray	-		-		-
Spec. Clinic/Health Ed./Conf.	-		1	150	150
Patient Holding/Sleep Room	1	80	1	80	-
Storage	2	45	1	100	55
HC toilet	1	36	2	2 @ 60=120	84
Janitorial Closet	-		1	30	30
Total Net Area				1270	
Mechanical Room	31			147	116
Morgue				30	30

The Noatak Clinic has a current gross area of 1242 s.f. This would require a gross building area expansion of approximately 758 s.f. to meet the 2000 s.f. minimum ARPCF requirement for the Medium clinic.

An analysis of the existing building's program functions follows. Please also refer to the floor plan in Section H:

- **Arctic Entries:** There are two arctic entries to the building, neither of which has a ramp. (See Trauma) Patients are currently directed into the clinic through what was originally designed as the back door. This brings patients in through the private service areas of the clinic.
- **Waiting:** The patients wait in an open area in the center of the clinic. The original waiting area has been partially taken up by an new mechanical room. The room is poorly located for protection of patient privacy.
- **Trauma/Telemed/Exam:** This clinic has a trauma room that is generally adequate. It has direct access to a dedicated exterior door and ramp. This solution is not ideal in

winter because the temperature of the room drops considerably when bringing a patient in. The patient usually needs to be moved to a warm environment. Relocating the ramp to the side entry door is proposed, increasing the door size to improve access.

- **Office/Exam:** There is one exam room in addition to the trauma space. It is not used as an office. It is an adequate exam room.
- **Administration/Records:** The clinical staff have one large office which provides adequate work space for two people. There is usually a third employee who does not have a good workstation. Rearranging the space using modular work surfaces could greatly improve workability of the space.
- **Pharmacy/Lab:** Most lab/pharmacy activities occur in the Trauma room as it is the best equipped room, however this room does not have a sink.
- **Specialty Clinics:** Specialty clinics require the use of one of the exam rooms and the corridor space. This is a major disruption to ongoing clinic activities.
- **Patient Holding/Sleep:** A small sleep room is reserved, however it is located in the middle of the clinic which makes it disruptive for itinerants. It is a good location for patient holding, however.
- **Storage:** The current side entry vestibule is used for storage. The other entry vestibule is used for storage. One 85 s.f. room is used for secure medical supply storage.
- **HC Toilet Room:** The toilet room is undersized for handicapped access. The deficiencies propose a remodel to increase this room to add an accessible shower.
- **Janitor Closet:** A small mechanical room is used for janitor storage. This practice can increase the hazard of fire and is not recommended.
- **Ancillary Spaces:** The kitchen incorporates a stove, sink refrigerator, and a shower. This is unusual, however, the consolidation of plumbing may have been a consideration.

D. Architectural/Structural Condition

The building is fairly well constructed, however, the flooring is failing and the double aluminum sliding windows function poorly in cold weather. The walls are 2x6 framing with T-111. It is recommended that the walls be re-insulated from the outside. The piling seems to be keeping the building level, as do the surface pads provided on the addition, however, this combination of dissimilar foundation systems often invites future problems. The building should be placed on a new unified foundation.. The stairs need ADA handrails and the main entry needs a ramp. The program recommendations include relocating the main entrance back to the side door that was originally designed as the entry.

E. Site Considerations

The existing site is a good location for a clinic, given the nearby school and community facilities. A site near the adjacent residential growth area (new subdivision) has been tentatively selected by the community for a replacement clinic. This proposed site is satisfactory and will be close to needed utilities, however, this site is approximately a half mile from the school and other community facilities. It is recommended that community preference, accessibility of clinic services to the community and related aspects of health care delivery be carefully considered prior to final site selection.

Site utilities include village water, sewer, power, and telephone service directly to the building.

F. Mechanical Condition

Heating and Fuel Oil: A Weil McLain Gold (Oil) P-WTGO-3 boiler with a single zone of baseboard provides heating for the building. The baseboard is a residential grade and is in fair condition. A single zone of heating with the thermostat located in the waiting area is minimal. To provide comfort control in exam rooms and other critical areas, additional zones should be considered. Fuel oil is provided from a single 260-gallon cylindrical tank mounted on a wood platform. The tank is in fair condition and is vented properly. The tank is too close to the building and needs to be relocated a minimum of 5 feet away. The tank and piping from the tank to the boiler also needs to be supported properly. Deficiencies for the systems are noted in the Deficiency Evaluation and Cost Assessment forms.

Ventilation: There is no ventilation serving the building except for an exhaust fan in the restroom, which was not functioning at the time of the visit. The fan is ducted up through the roof. The clinic needs to be provided with a mechanical ventilation system and should not rely on operable windows alone.

Plumbing: Cold water is provided to the clinic from the village water supply and an electric water heater provides hot water. There is a 4-inch waste line that gravity flows to the village sewer system. Plumbing fixtures in the clinic include a toilet and lavatory in the restroom, and a two-compartment kitchen sink and bathtub/shower combination in the Kitchen area. None of the plumbing fixtures meet ADA requirements. A clothes washer is also located in the kitchen, but its washer box is located in the boiler room. The lavatory in the restroom has a hose connection at the faucet to allow filling of the mop bucket, but there is no vacuum breaker or other back-flow prevention device on the faucet, which is required by code to prevent cross contamination of the domestic water.

G. Electrical Condition

Power: 120/240-volt single-phase power is provided to the clinics electrical meter from an overhead service. The main breaker size at the meter is 100 amps and the electrical panel located on the inside wall opposite the meter is rated at 225 amps. All conductors to the panels

are copper. The panel has room for 30 breakers. Twenty-six breakers were installed and there were 2 spares. Wiring from the panel is run in EMT and all conductors are copper. The panel appears to be properly grounded and the installation is neat and orderly. The number of receptacles inside the building are appropriate and no plug strips were observed. The receptacles near the lavatory in the restroom or the sink in the kitchen were not protected with GFCIs. There were no weatherproof receptacles located on the outside of the building.

Lighting and Emergency Fixtures: Surface mounted florescent fixtures using four 4-foot, 35 watt, 40F lamps provide interior lighting. The lighting levels in the building appear acceptable and were reported to be satisfactory. Exterior lighting was provided with incandescent fixtures at the entrances and next to the fuel tank. The fixtures were in poor condition with most of the covers missing and should be replaced. There are no emergency light fixtures in the building. Emergency lights need to be added near the building entrances. There is one exit sign located over the front door and one located at the side door. The side door exit is being used for storage and is no longer serving as an exit. The exit sign at the front door is hard wired to power, but the battery was dead when the unit was tested. They should both be replaced with lit exit signs. There is one battery type smoke detector located in the hallway of the building.

Telecommunications: The telecommunication system includes three phone lines serving the building. One line is used for the local incoming line, one for a fax line, and one for a dedicated line for communication with the Kotzebue Hospital. A Telemed system was also recently installed.

H. Existing Facility Floor Plan

See following sheet for the floor plan of the existing clinic.

J. Community Plan

Refer to the attached community plan for location of the existing clinic and the proposed location for the new clinic. If the existing clinic site is the preferred location or if a new site has not yet been selected, only the existing clinic location will be shown.

IV. DEFICIENCY EVALUATION AND COST ASSESSMENT

The attached deficiency reporting forms are based on Public Health Service form AK H SA-43. The forms are numbered sequentially for each discipline starting with **A01** for Architectural and structural deficiencies, **M01** for Mechanical deficiencies and **E01** for Electrical deficiencies.

A. Deficiency Codes

Deficiencies are further categorized according to the following PHS Deficiency codes to allow the work to be prioritized for federal funding, should that apply. Deficiency codes used in this survey include:

- 02 Fire and Life Safety:** These deficiencies identify areas where the facility is not constructed or maintained in compliance with provisions of the state mandated building codes including the International Building Code, The Uniform Fire Code, NFPA 101, The Uniform Mechanical and Plumbing Codes and The National Electrical Code.
- 03 Safety:** These deficiencies identify miscellaneous safety issues.
- 04 Environmental Quality:** This addresses DEC regulations, hazardous materials and general sanitation.
- 05 Program Deficiencies:** These are deficiencies which show up as variations from space guidelines established in the Alaska Primary Care Facility Facility Needs Assessment Project and as further evaluated through observation at the facility site and documented in the facility floor plans
- 07 Disability Access Deficiencies:** The items with this category listing are not in compliance with the Americans with Disabilities Act.
- 08 Energy Management:** These deficiencies address the efficiency of heating systems/fuel types and the thermal enclosures of buildings.
- 11 Structural Deficiencies:** These are deficiencies with the fabric of the building. It may include the foundations, the roof or wall structure, the materials used, the insulation and vapor retarders, the attic or crawl space ventilation and the general condition of interior finishes. Foundation systems are included in this category.
- 12 Mechanical Deficiencies:** These are deficiencies in the plumbing, heating, ventilating, air conditioning, or medical air systems.
- 13 Electrical Deficiencies:** These are deficiencies with electrical generating and distribution systems, fire alarm systems and communications systems.
- 14 Utilities:** This category is used for site utilities, as opposed to those within the building and may include sewer lines and water and power distribution.

B. Photographs

Each sheet has space for a photograph. Some deficiencies do not have photos. Photographs do not cover all areas where the deficiencies occur but are intended to provide a visual reference to persons viewing the report who are not familiar with the facility. Additional photographs of the clinic and the surrounding area are included in Appendix B.

C. Cost Estimate General Provisions

New Clinic Construction

- **Base Cost**

The Base Cost provided in Section VI of this report is the direct cost of construction, inclusive of general requirements (described below) and contingency for design unknowns (an estimating contingency). The base cost is exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The Project Factors and Area Cost Factor are multipliers of the base costs.

General Requirements are based on Anchorage costs without area adjustment. It is included in the Base Cost for New Clinics. These costs are indirect construction cost not specifically identifiable to individual line items. It consists of supervision, materials control, submittals and coordination, etc. The general requirements factor has not been adjusted for Indian Preference.

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned.

- **Project Cost Factors**

Equipment Costs for new medical equipment has been added at 17% of the cost of new floor space.

Design Services is included at 10% to cover professional services including engineering and design.

Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.

Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Estimated Total Project Cost of New Building**

This is the total estimated cost of the project, including design services. The construction contract will be work subject to Davis Bacon wages, and assumes construction before year-end 2001. No inflation factor has been applied to this data.

Remodel, Renovations, and Additions

- **Base Cost**

The Base Cost provided in the specific deficiency sheets is the direct cost of construction, exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Most of the deficiency items do not constitute projects of sufficient size to obtain efficiency of scale. The estimate assumes that the projects are completed either individually, or combined with other similar projects of like scope. The numbers include moderate allowances for difficulties encountered in working in occupied spaces and are based on remodeling rather than on new construction costs. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The General Requirements, Design Contingency and Area Cost Factors are multipliers of the base costs.

The cost of Additions to clinics is estimated at a unit cost higher than New clinics due to the complexities of tying into the existing structures.

Medical equipment is calculated at 17% of Base Cost for additions of new space only and is included as a line item in the estimate of base costs.

- **General Requirements Factor**

General Requirements Factor is based on Anchorage costs without area adjustment. The factor is 1.20. It is multiplied by the Base Cost to get the project cost, exclusive of planning, architecture, engineering and administrative costs. This factor assumes projects include multiple deficiencies, which are then consolidated into single projects for economies of scale. The general requirements factor has not been adjusted for Indian Preference.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Contingency for Design Unknowns (Estimating Contingency)**

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned. The factor used is 1.15.

- **Estimated Total Cost**

This is the total estimated bid cost for work completed under Davis Bacon wage contracts, assuming construction before year-end 2001. This is the number that is entered in the front of the deficiency form. No inflation factor has been applied to this data.

- **Project Cost Factors**

Similar to new clinics, the following project factors have been included in Section VI of this report.

Design Services is included at 10% to cover professional services including engineering and design.

Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.

Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Estimated Total Project Cost of Remodel/Addition**

This is the total estimated cost of the project including design services, the construction contract cost for work completed under Davis Bacon wages and assuming construction before year-end 2001. No inflation factor has been applied to this data.

V. SUMMARY OF EXISTING CLINIC DEFICIENCIES

The attached table summarizes the deficiencies at the clinic and provides a cost estimate to accomplish the proposed modifications. If all deficiencies were to be addressed in a single construction project there would be cost savings that are not reflected in this tabulation. The total cost of remodel/addition shown in Section VI is intended to show an overall remodel cost that reflects this economy. Refer to Section VI for a comparison of remodel/addition costs to the cost of new construction. The specific deficiency sheets are included in Appendix A.

VI. NEW CLINIC ANALYSIS - NOATAK

The decision on whether to fund new clinic construction or a remodel/addition of the existing clinic is to be determined by comparing the cost of a new facility designed to meet the program requirements of the Alaska Rural Primary Care Facilities minimum area requirements with the projected combined cost of renovating, remodeling and adding onto the existing building to provide an equivalent facility. If the cost of the remodel/addition project is greater than 75% of the cost of constructing an altogether new facility then a new facility is recommended. That ratio is computed as follows:

- **The cost of a new clinic in Noatak is projected to be:**

Base Anchorage Cost per s.f.	\$183/ s.f.
Medical Equipment Costs @ 17%	\$31
Design Services 10%	\$18
Construction Contingency 10%	\$18
Construction Administration. 8%	\$15
Sub-total	\$265/ s.f.
Area Cost Factor for Noatak 1.82*	
Adjusted Cost per s.f.	\$483/ s.f.

Total Project Cost of NEW BUILDING 2,000 x \$483 = \$966,000

- **The cost of a Remodel/Renovation/Addition is projected to be:**

Projected cost of code/condition renovations (From the deficiency summary)	
90% of cost of code/condition improvement**	\$221,062 Renovation
Projected cost of remodeling work (See A08)	
1,242 s.f. clinic @ 33% remodel = 408 s.f.	\$60,095 Remodel
Projected cost of building addition (See A09)	
2,000 s.f. – 1,242 s.f. = 758 s.f.	\$414,196 Addition
<input type="checkbox"/> Design 10%, Const. Contingency 10%, Const. Admin. 8%	\$194,699

Total Project Cost of REMODEL ADDITION \$890,052

- **Ratio of remodel:new is \$890,052 : \$966,000 = 0.92X**

The cost of a remodel/addition for this clinic would cost 92% the cost of a new clinic, therefore, a new clinic is recommended for this community.

* The Area Cost Factor was refined by Estimations, Inc. in July 2001 based on information obtained during the site visit.

** The 90% factor represents economy of scale by completing all renovation work in the same project.

Appendix A: SPECIFIC DEFICIENCIES LISTING

Refer to the attached sheets for the listing of the individual deficiencies and the corrective action recommended.

Appendix B: GENERAL SITE PHOTOGRAPHS

The following sheets provide additional photographic documentation of the existing building and surroundings.

Appendix C: ADCED Community Profile

Refer to the attached document prepared by Alaska Department of Community and Economic Development profiling the community of Noatak.

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